

Hazardous Waste Management Commission Report

April through June 2012

Quarterly Report



MISSOURI
DEPARTMENT OF
NATURAL RESOURCES

Ozarac Cave Fish

Hazardous Waste Management Commissioners

Michael Foresman, Chair
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**"The goal of the Hazardous Waste Program is to
protect human health and the environment from
threats posed by hazardous waste."**

For more information

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Hazardous Waste Program**

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Past issues of the Hazardous Waste Management Commission Report are
available online at dnr.mo.gov/env/hwp/quarterlyreport.htm.



**Missouri Department of Natural Resources
Hazardous Waste Program**

Program Update

June marks the official change from spring to summer. It is a time of year when our staff takes advantage of the fair weather to get out in the field to conduct their inspections, perform sampling activities and conduct other oversight activities. However, the end of June also marks the end of the state fiscal year and that keeps our Budget and Planning employees working hard, to make sure everything balances, so they can close out the year. Included in this report are several charts showing the overall Department of Natural Resources operating budget and a couple of specific Hazardous Waste Program budget charts.

Something we always look forward to in the summer months is The Missouri Waste Control Coalition Conference, which was held June 17 through 19 at the Lodge of the Four Seasons in Lake Ozark. More than 320 people from various industries and agencies attended the conference. Since 1972, this conference has covered such topics as solid waste, environmental issues, brownfields and tanks. For example, the Tanks Section held a workshop targeted toward environmental consultants who provide services to tank owners and operators. This workshop provided consultants with information and training regarding monitoring well registration and installation. Next year's conference is scheduled for June 30 through July 2, 2013 and is moving to the Tan-Tar-A Resort in Lake Ozark. Please mark your calendars for next year! For more information about MWCC visit www.mowastecoalition.org.

Also, in this edition, you can look forward to reading more about the Brownfields Voluntary Cleanup Program. This program issued three certificates of completion for Bellerive Plaza, Chouteau Crossing and US Ink Facility. Each site was established more than 50 years ago, and reflects a lot of St. Louis history. Program staff work hard to make historic sites like these safe for future use.

This leads us to this quarter's feature articles about Natural Resource Damages, or NRD, and the Springfield Plateau Regional Restoration Plan. These articles, which are located in the Permits and Superfund Sections of the report, highlight the increasing effort the department is making in regard to NRD assessment and restoration. While the Permits Section article discusses more broadly the concept of NRD, the Superfund Section article focuses on a more specific issue, the Springfield Plateau Regional Restoration Plan. Through this plan, the natural resource trustees have developed a process for expediting more comprehensive and efficient restoration actions by combining multiple natural resource damages settlements, making for more efficient use of the funds available.

As you can see, things have been very busy in the program this quarter. We thank you for your interest in these activities and hope you enjoy this edition.

Sincerely,



David J. Lamb

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Missouri Department of Natural Resources - Hazardous Waste Program Budget and Planning Section

Fiscal Year 2013 Budget

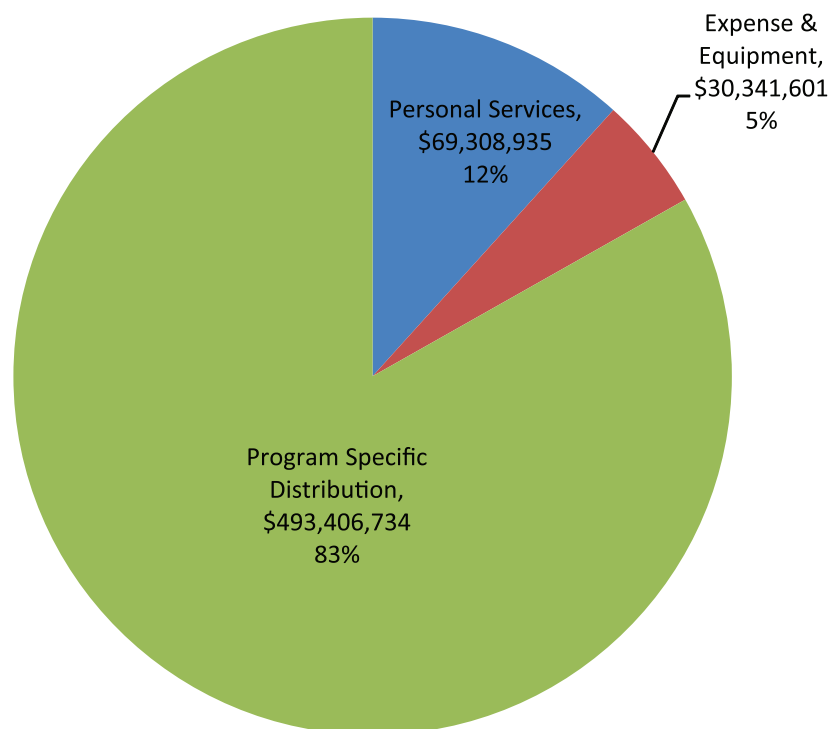
The Budget and Planning Section is responsible for the financial management of the Hazardous Waste Program. It is the section's responsibility to coordinate the program's budget requests each fiscal year. The state is currently operating in fiscal year 2013, which began on July 1, 2012 and runs through June 30, 2013. The process to establish the fiscal 2013 budget began in July 2011 when the state budget director issued budget preparation instructions.

The Budget Program within the Division of Administrative Support coordinates the overall Department of Natural Resources' operating, leasing and capital improvements budgets. The department's operating budget is available online at <http://oa.mo.gov/bp/budreqs2013/DNR/DNR.pdf>.

Each state agency is required to submit its completed budget request to the state budget director annually by October 1. The governor may make changes to these department budget requests and releases the governor's recommended budget in conjunction with the governor's State of the State address in January.

The department's fiscal year 2013 operating budget is in House Bill 6, which had to be truly agreed to and finally passed by May 11, 2012. The governor signed the appropriations bill on June 22, 2012. The process for the fiscal 2014 budget will begin with the department's submission on Oct. 1, 2012.

FY 2013 Department of Natural Resources Truly Agreed and Finally Passed Operating Budget (HB6)* \$593,057,270

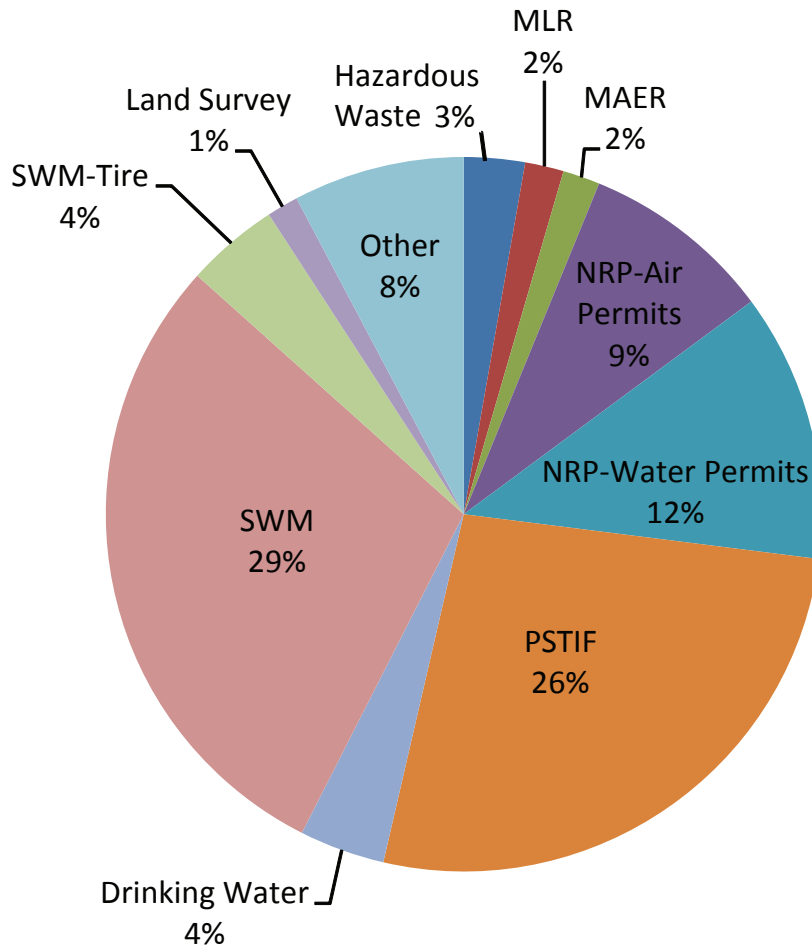


*Does not include appropriated transfers
Oct. 2, 2012

Missouri Department of Natural Resources - Hazardous Waste Program Budget and Planning Section

Budget and Planning

FY 2013 Truly Agreed and Finally Passed Environmental Fee Appropriations \$86,295,260

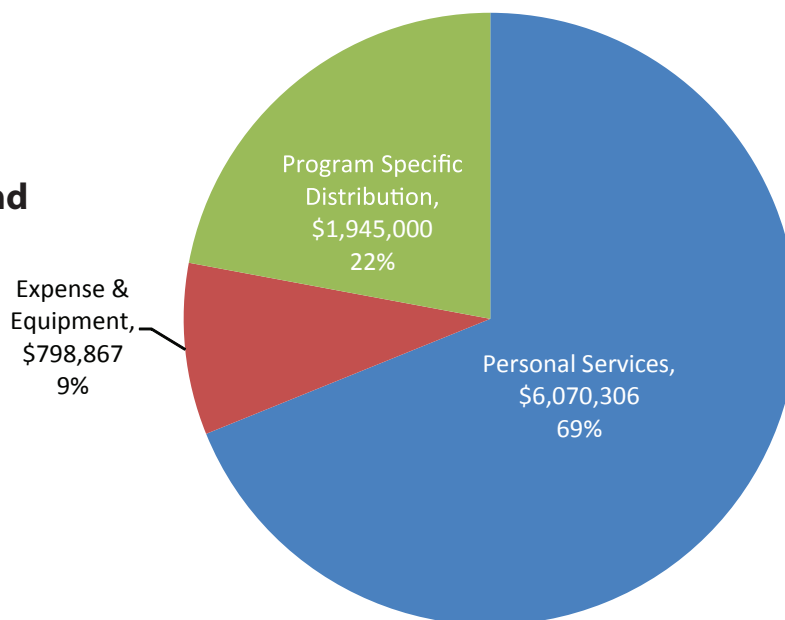


Division	Amount
SWM	\$25,170,468
PSTIF	\$22,961,440
NRP-Water Permits	\$10,485,200
NRP-Air Permits	\$7,486,775
Other	\$6,677,332
SWM-Tire	\$3,625,827
Drinking Water	\$3,330,955
Hazardous Waste	\$2,375,084
MLR	\$1,508,554
MAER	\$1,444,543
Land Survey	\$1,229,082

Missouri Department of Natural Resources - Hazardous Waste Program Tanks Section

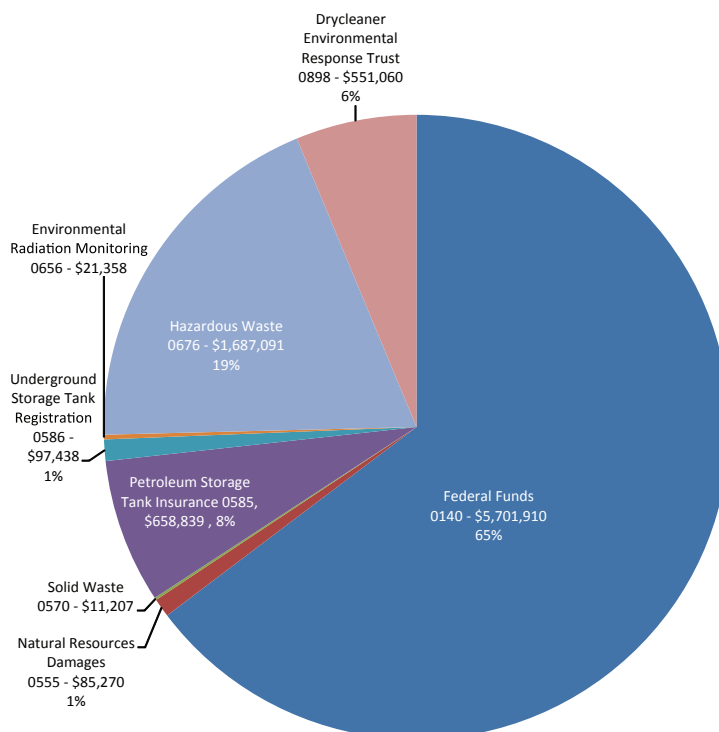
Budget and Planning

**Hazardous Waste Program and Petroleum Related Activities
FY2013 Truly Agreed and Finally Passed Operating Budget (HB6)*
TOTAL: \$8,814,173**



*Does not include appropriated transfers
Oct. 2, 2012

**Hazardous Waste Program and Petroleum Related Activities
FY2012 Truly Agreed and Finally Passed Operating Budget (HB6)*
TOTAL: \$8,814,173**



Missouri Department of Natural Resources - Hazardous Waste Program Brownfields/Voluntary Cleanup Section

The Missouri Department of Natural Resources issued certificates of completion for three Brownfields/Voluntary Cleanup Program sites during April to June. Brownfields are real property, the expansion, redevelopment or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant or contaminant.

Through the Brownfields/Voluntary Cleanup Program, private parties agree to clean up a contaminated site and are offered some protection from future state and federal enforcement action at the site in the form of a "No Further Action" letter or "Certificate of Completion" from the state.

Bellerive Plaza in St. Louis

The Brownfields/Voluntary Cleanup Program, or BVCP, issued a certificate of completion for the Bellerive Plaza site at 12756 Olive Blvd. in St. Louis. The site was a farmstead from 1904 until 1976 when it was developed for commercial use. The site consists of three multi-tenant retail buildings, anchored by a 68,000 square foot grocery store. Historical operations of concern have been dry cleaners and automotive service and repair. Investigations showed the presence of chlorinated solvents and petroleum hydrocarbons in soil and groundwater.

Preliminary investigations were conducted at the dry cleaners and the automotive service center. None of the contaminants detected at the automotive service center were above the Default Target Levels, or DTLs, the lowest risk-based action levels, but chlorinated solvents were present above the levels in soil near the dry cleaners. Further investigation work consisted of installing groundwater monitoring wells and collecting surface and subsurface soil samples. Chlorinated solvents in excess of the levels were detected in surface soil and groundwater during this investigation. Additional wells were installed to locate the contamination in groundwater. All of the wells were sampled on a quarterly basis to assess groundwater plume stability. After it was determined the plume appeared to be decreasing, a risk assessment was conducted.

No possible asbestos-containing material and lead-based paint were addressed as part of this BVCP project. The department determined the site is safe for its intended use.

The site will continue as multi-tenant retail anchored by a Schnucks grocery store.

Chouteau Crossing in St. Louis

The Brownfields/Voluntary Cleanup Program issued a certificate of completion for the Chouteau Crossing - Lot A site at 2327 Chouteau Ave. in St. Louis. Chouteau Crossing - Lot A is a 1.550 acre parcel of the Chouteau Crossing site with an approximately 20,000 square foot building. The site has been developed since 1929 when the Missouri Boiler and Tank Company established its operations. The company operations included the manufacturing of tanks, pressure vessels and a repair/refabrication service. The site operated in this same capacity through 1995. Since 1995 the site has been used for truck parking and storage for plumbing supplies. Four underground storage tanks, or USTs, were removed prior to the site being enrolled in the program. Two additional tanks were discovered during site construction and removed.



Chouteau Crossing roof top garden

Investigations showed elevated levels of mercury, arsenic, diesel and oil range hydrocarbons, and polycyclic aromatic hydrocarbons, or PAHs, present in soil at the site. The building also contained asbestos-containing material and lead-based paint.

A risk assessment was conducted following completion of soil and groundwater sampling. None of the contaminants on Lot A are present above unrestricted risk-based target levels. Asbestos-containing material and lead-based paint, were removed from the building, but some paint was left in the building, either enclosed or encapsulated. An operations and maintenance plan that governs inspection and maintenance of the lead-based paint was filed in the chain of title for the property. The department determined the site is safe for its intended use.

The building has been renovated and is on track to receive a Gold Certified Leadership in Energy and Environmental Design, or LEED, rating and is partially occupied by Dynalabs, an analytical laboratory for pharmaceuticals.



Chouteau Crossing roof top garden

U.S. Ink Facility in St. Louis

The Brownfields/Voluntary Cleanup Program issued a certificate of completion for the U.S. Ink Facility (former) site at 1540 Fairview Ave. in St. Louis. This facility was developed in 1961 on previously undeveloped land. The facility manufactured black printing ink until approximately 1972 when the facility converted to color ink production. U.S. Ink took over operations at the facility in 2007. The facility ceased operations in 2009. The majority of the site is covered by buildings or is paved. The office/warehouse building is approximately 16,900 square feet. The production building is approximately 26,200 square feet.

A Phase I and a Phase II environmental site assessment were conducted at the site. The potential areas of concern were:

- Interior mixing/storage tanks and associated trench system in the production building.
- Former interior mixing/drum storage area and associated trenches in northeast corner of the current office/warehouse building.
- Former exterior railcar unloading operations area along northeast side of production building.
- Long industrial use of the site.

The sampling results from the Phase II assessment indicated the only chemicals of concerns above the Missouri Risk-Based Corrective Action default target levels were lead and arsenic in soil samples. When the lead and arsenic levels were compared to background lead and arsenic levels referenced in the Tidball 1984 document, the levels were within typical background concentrations. The department determined the site is safe for its intended use.

Missouri Department of Natural Resources - Hazardous Waste Program
Brownfields/Voluntary Cleanup Section**Sites in Brownfields/Voluntary Cleanup**

	Active	Completed	Total
April	248	645	893
May	251	645	896
June	253	647	900

New Sites Received

April

May

Station G Apartments, St. Louis
North Broadway Building, St. Louis
Flance Center at Murphy Park, St. Louis

June

North Sarah, St. Louis
Braymer Rail Yard, Braymer
Chillicothe Rail Yard, Chillicothe
Newton Rail Yard, Newtown
Hardy's Truck & Auto Parts, Springfield

Sites Closed

April

US Ink Facility (former), St. Louis

May

June

Bellerive Plaza, St. Louis
Chouteau Crossing-Lot A, St. Louis

Drycleaning Environmental Response Trust Fund

The department's Drycleaning Environmental Response Trust, or DERT, Fund provides funding for the investigation, assessment and cleanup of releases of chlorinated solvents from dry cleaning facilities. The two main sources of revenue for the fund are the dry cleaning facility annual registration surcharge and the quarterly solvent surcharge.

Registrations

The registration surcharges are due by April 1 of each calendar year for solvent used during the previous calendar year. The solvent surcharges are due 30 days after each quarterly reporting period.

Calendar Year 2011	Active Dry Cleaning Facilities	Facilities Paid	Facilities in Compliance
Jan. - March 2012	210	99	47.14%
April - June 2012	210	180	85.71%

Calendar Year 2012	Active Solvent Suppliers	Facilities Paid	Suppliers in Compliance
Jan. - March 2011	11	11	100%
April - June 2011	11	11	100%

Cleanup Oversight

Calendar Year 2011	Active	Completed	Total
Jan. - March 2012	24	10	34
April - June 2012	24	10	34

No New Sites Received or Closed

Missouri Department of Natural Resources - Hazardous Waste Program Brownfields/Voluntary Cleanup Section

Reimbursement Claims

The applicant may submit a reimbursement claim after all work approved in the work plan is complete and the fund project manager has reviewed and approved the final completion report for that work. The fund applicant is liable for the first \$25,000 of corrective action costs incurred.

	Received	Under Review	Paid/Processed
April	1	4	1
May	4	14	8
June	1	6	1

	Received	Under Review	Paid/Processed
April	\$3,875.07	\$82,528.34	\$394.86
May	\$93,554.45	\$347,887.14	\$135,000.00
June	\$23,239.50	\$86,824.13	\$43,566.00

Reimbursement Claims Processed:

American Cleaners	Bridgeton	\$37,264.00
American Cleaners - University City	University City	\$3,281.00
Antioch One Hour Cleaners	Kansas City	\$25,000.00
Busy Bee Laundry	Rolla	\$30,137.00
Fenton Plaza 48	Fenton	\$2,978.00
Grandview Plaza	Grandview	\$25,980.63
Premier Dry Cleaners of KC	Kansas City	\$4,231.45
Tri State Service Co - E. Trafficway Site	Springfield	\$33,699.68
Yorkshire Cleaners	Marlborough	\$22,823.10

Total reimbursements as of June 30, 2012: \$1,885,959.50

DERT Fund Balance as of June 30, 2012: \$1,281,298.75

Inspections and Assistance

Regional Office Hazardous Waste Compliance Efforts

- Conducted 137 hazardous waste generator compliance inspections:
 - 18 at large quantity generators.
 - 89 at small quantity generators.
 - 24 at conditionally exempt small quantity generators.
 - Six at E-waste recycling facilities.
- Conducted five compliance assistance visits at hazardous waste generators.
- Issued 90 letters of warning and four notices of violation requiring actions to correct violations cited during the 137 inspections conducted.
- Received and investigated 66 citizen concerns regarding hazardous waste.

Hazardous Waste Compliance and Enforcement Efforts

- Conducted 14 inspections of commercial hazardous waste treatment/storage/ disposal facilities, one of which resulted in the issuance of a notice of violation.
- Issued three penalty negotiation offer letters.
- Worked with the Attorney General's Office to prepare five settlement agreements.
- Resolved and closed two hazardous waste enforcement cases.
- Received three new enforcement cases and issued six letters of intent to initiate enforcement action.
- Finalized three settlement agreements.
- Referred one company to the Attorney General's Office.

Tanks Compliance and Enforcement Unit

- The Tanks Compliance and Enforcement Unit, or TCEU, staff continues its work to assist owners, operators and contractors with questions about the recently amended underground storage tank regulations. Staff answered many questions about how the regulations are interpreted and applied regarding closure requirements, assessing out-of-use tank systems, for assessments to allow steel tanks to remain in use and reporting of Underground Storage Tank, or UST, system tests and evaluations.
- The Environmental Protection Agency, or EPA recently proposed changes to the federal UST regulations and the department reviewed and prepared comments about these proposed changes.
- The Missouri Legislature passed a bill during the 2011 session for the Petroleum Storage Tank Insurance Fund, or PSTIF, to initiate action for UST operator training. Heather Peters of the TCEU is currently serving as the liaison with PSTIF on this project, working with staff from the Tanks Section and other department staff and management to provide input and support.
- Staff created 12 enforcement records for UST sites that had lapsed financial responsibility coverage.

UST owners or operators subject to financial responsibility requirements must have a financial mechanism to clean up a site if a release occurs, to correct environmental damages and to compensate third parties for injury to their property and themselves. Releases can be costly and financial responsibility is an important component in protecting the health and property of tank owners/operators and neighbors. Staff resolved 75 enforcement cases, including 44 that also had financial responsibility violations. The unit also referred four facilities to the Attorney General's Office to take action for continuing financial responsibility violations.

Missouri Department of Natural Resources - Hazardous Waste Program Compliance and Enforcement Section

Polychlorinated Biphenyl Inspector

The polychlorinated Biphenyl, or PCB, inspector conducted 22 compliance inspections at various types of facilities throughout the state. The inspector's reports are forwarded to EPA Region 7, which has authority for taking any necessary enforcement action regarding PCBs according to the Toxic Substances Control Act.

Hazardous Waste Transporter Inspector

The inspector conducted 21 commercial vehicle inspections, during which three vehicles were placed out of service. The inspector also wrote up 10 other Department of Transportation, or DOT, safety violations. As part of the Commercial Vehicle Safety Association's protocol, the department sends the inspection reports to the Missouri State Highway Patrol. The transporter must certify to the patrol the violations were corrected.

The inspector also issued three notices of violation to unlicensed hazardous waste transporters and three notices of violation to generators who hired unlicensed transporters.

The inspector sent two letters to companies that were inactive, unregistered or conditionally exempt small quantity generators that shipped either small or large quantities of hazardous waste. These facilities are required to register as generators with the department.

As of June 30, 2012, there were 237 licensed hazardous waste transporters in Missouri. The number of licensed hazardous waste transporters has slowly increased over the past two years.

Eagle-Picher Technologies LLC - Joplin

Eagle-Picher Technologies LLC is a battery manufacturer and designer in Joplin. Inspectors found the facility failed to adhere to the previously established schedule of compliance in its hazardous waste permit.

As a result of the department's actions, the facility submitted all documents necessary to comply with the schedule of compliance to fulfill the requirements of the permit. The documents submitted help to assure the surface water monitoring program is adequate to minimize contamination of the creek that runs through the property. The site excavation plan serves to identify site contaminants and to prevent employees and industrial workers from accidental exposure to lead, mercury and other hazardous substances. The company also paid a \$200 civil penalty to the Jasper County school fund.

Positronic Industries Inc. - Springfield

Positronic Industries Inc. is an electronics plater located in Springfield. Inspectors found the facility had failed to:

- Accumulate waste at or near the point of generation or under the control of the operator.
- Keep containers of hazardous waste closed while in storage.
- Segregate containers of incompatible hazardous wastes while in storage.
- Take necessary actions to minimize the potential of an emergency at the facility.
- Clearly mark containers of hazardous waste with the words "Hazardous Waste".
 - Package, mark and label containers of hazardous waste according to Department of Transportation requirements during the entire on-site storage period.
- Date containers of hazardous waste with the date they were placed into storage.
- Conduct adequate inspections of the facility.
- Take precautions to prevent accidental reaction of hazardous waste and ensure transporter name, Missouri and Environmental Protection Agency identification numbers are correct on manifests.

As a result of the department's actions, the facility:

- Began new internal policies to separate incompatible wastes.
- Consolidated many of the hazardous waste generating activities into one facility instead of several.
- Developed and implemented a new and much more extensive training program about hazardous waste management for employees.

The penalty was \$8,000, of which \$4,000 is suspended contingent on the facility not committing any repeat or Class I violations for two years following the effective date of the settlement agreement. The remaining penalty of \$4,000 was paid to the Greene County school fund. The facility also agreed to a pollution prevention Missouri Supplemental Environmental Performance Project, which involved installing individual heaters, pumps and solenoids in plating baths to reduce the energy and water resources needed. The estimated cost is \$18,000 and will be completed within the two year time frame of suspended penalties. In general, results of the facility's and the department's actions include protection of the environment and adjoining property and persons, safer working conditions for employees, reduced usage of natural resources and reduced usage of electricity.

Doe Run Buick Resource Recycling LLC - Boss

Doe Run Buick Resource Recycling LLC is a secondary lead smelter and permitted commercial hazardous waste management facility in Boss. During the inspection, the facility was observed to have three violations, but two of those violations were covered by a joint federal/state multi-media/multi-facility consent decree and enforcement agreement and could not be addressed in this action. The remaining violation that could be addressed was Buick failed to comply with the terms of a permit modification by failing to remove all the material from the slag storage area staging bins within 30 days of Feb. 16, 2010, in violation of Section 260.390, Revised Statutes of Missouri, or RSMo.

As a result of the department's actions, the appeal of the permit was resolved and a penalty of \$4,000 was paid to the Iron County school fund. The facility's compliance with the permit conditions protects the environment and the community.

Waste Express Inc. - Kansas City

Waste Express Inc. is a permitted commercial hazardous waste treatment, storage and disposal facility in Kansas City. The inspector found the facility failed to:

- Provide a copy of the waste minimization certification.
- Clearly mark hazardous waste containers.
- Mark containers with accumulation start date.
- Keep the base of the containment area impervious, free of cracks and gaps.
- Ensure waste arrived at its final destination within 10 days of the manifest being signed by the original transporter.
- Provide adequate secondary containment for transfer waste.
- Maintain adequate secondary containment at a waste oil transfer facility.
- Obtain an approved closure plan prior to implementing closure of the tanks.
- Notify the department, in writing, 60 days prior to implementing closure of tanks.

As a result of the department's actions, the facility repaired curbs and floors of containment areas and paid a \$47,500 penalty to the Jackson County school fund. The facility was sold in April and is now owned and operated by Hazmat Inc. In addition to the containment repairs and the penalty, department actions resulted in protection of the environment and the adjoining property/persons and safer working conditions for employees.

Missouri Department of Natural Resources - Hazardous Waste Program Compliance and Enforcement Section

MMP Group of Companies Inc. - Kansas City

MMP is a plating facility located in Kansas City. Inspectors found that the facility had failed to:

- Make a hazardous waste determination on solid waste it produces.
- Update notification to reflect generator status change.
- Demonstrate legitimate recycling.
- Have manifests returned within 35 days or submit an exception report.
 - Keep containers of hazardous waste closed while in storage.
 - Mark "Hazardous Waste" on hazardous waste containers.
 - Package, label, mark containers per U.S. Department of Transportation requirements for the entire on-site storage period.
- Mark the start date of accumulation on containers.
- Inspect and maintain the facility weekly.
- Conduct daily inspection of areas subject to spills.
- Keep satellite containers closed.
- Ensure waste is compatible with satellite container.
- Move satellite containers to storage within three days of filling.
- Make sure personnel were trained to respond to emergencies including the use of alarm systems, emergency equipment and contingency plan.
- Prevent employees from working in unsupervised positions until they have completed training.
- Review training annually.
- Have a program director trained in hazardous waste management procedures.
- Keep a personnel training plan on-site.
- Give the job title, job description and name of employee filling each position in the training plan.
- Give a written description of introductory and continuing training that will be given to each position.
- Maintain documentation of training completed by personnel.
- Maintain records of current personnel until facility closure or three years for former employees.

As a result of the department's actions, the facility:

- Fabricated new parts for a hazardous waste hopper to ensure a closed container.
- Developed new storage plans to reduce the possibility of a release of hazardous waste.
- Developed and implemented a new and much more extensive training program about hazardous waste management for employees.

The penalty is \$46,000, of which \$28,000 is suspended contingent the facility does not commit any repeat or Class I violations for two years following the effective date of the settlement agreement. The remaining penalty of \$18,000 shall be paid in four payments of \$4,500 each to the Jackson County school fund. In general, these actions resulted in protection of the environment and adjoining property/ persons as well as safer working conditions for employees.

Green Ribbon Schools

Hazardous Waste Enforcement Unit staff assisted in the development of a hazardous waste evaluation for the Department of Elementary and Secondary Education's Green Ribbon School Program. Staff also reviewed and scored school applications using the evaluation. The Green Ribbon Schools is a U.S. Department of Education initiative designed to recognize schools that save energy, reduce costs, feature environmentally sustainable learning spaces, protect health, foster wellness and offer environmental education to boost academic achievement and community engagement.

Missouri Pesticide Collection Program

This summer through fall, the department's Hazardous Waste Program and Environmental Services Program staff are overseeing the Missouri Pesticide Collection Program. The Missouri Pesticide Collection Program is part of a Supplemental Environmental Project funded by Walmart as the result of a hazardous waste enforcement case. The project was established in a settlement agreement signed in March 2012. The settlement agreement required \$1,050,000 be spent to provide an opportunity for farmers and households in Missouri to properly dispose of their waste pesticides and herbicides.

The collection program is open only to households and farmers and is focused on the rural areas of the state. The program is overseen by the Hazardous Waste Program while the events themselves are conducted by a contractor, The Environmental Company.

Collections were held in Neosho on June 9 and Benton on June 23. These events will continue every two weeks at new locations, until the full project amount is depleted. Currently there are four more events scheduled statewide. The events will be held on Saturdays from 9 a.m. until 4 p.m. Additional collection events may be scheduled if funds remain. Upcoming dates are:

- July 7 – St. Joseph.
- July 21 – Cameron.
- Aug. 4 – Bunceton.
- Aug. 18 – Macon.
- Sept. 8 – Macon.
- Sept. 22 – Warrenton.
- Oct. 6 – Kennett.

For more information or questions about the pesticide collection program, visit the website at: <http://www.dnr.mo.gov/env/hwp/pesticide/> or contact Ricardo Jones at 573-526-3214.

Natural Resource Damages - Groundwater Assessment

Natural Resource Damage Assessment and Restoration, or NRDAR, is the process of determining injuries to natural resources due to hazardous substance releases or discharges of oil and receiving compensation to restore these injured natural resources and their services. The process is based mainly on the legal authorities of the Comprehensive Environmental Response, Compensation and Liability Act, or CERCLA, also known as the "Superfund" law, the Clean Water Act, the Oil Pollution Act and applicable state regulations. State and federal agencies and Indian tribes act as trustees of natural resources on behalf of the public and assess and recover damages resulting from natural resource injuries.

In 1988, the department's Hazardous Waste Program established a Natural Resource Damages, or NRD, program within its Superfund section. In 2010, this program was expanded to include staff from the Hazardous Waste Program's Budget and Planning, Compliance and Enforcement, Federal Facilities, Permits and Superfund sections. Designated permits section staff are tasked with conducting assessments for sites with groundwater injuries.

Who are Missouri's Trustees?

There are state, federal and tribal trustees who hold natural resources in trust for the benefit of the public. CERCLA, the Oil Pollution Act and the National Contingency Plan state the president and the governors of each state designate officials to act as natural resource trustees. In Missouri, the federal trustee is usually the U.S. Department of the Interior, which is represented by the Fish and Wildlife Service. Federal trustees may also include the departments of Defense, Energy, Commerce and Agriculture. The governor designated the director of the Missouri Department of Natural Resources as the state trustee. The Department of Natural Resources and the Missouri Department of Conservation signed a memorandum of agreement in which the Department of Conservation agrees to provide expertise and assistance to the Department of Natural Resources. There are no state or federally recognized American Indian tribes in Missouri.

What are Natural Resources and Natural Resource Services?

Natural resources are defined in CERCLA as "...land, fish, wildlife, biota, air, water, groundwater, drinking water supplies and other such resources belonging to, managed by, held in trust by, appertaining to, or otherwise controlled by the United States..., any State or local government, any foreign government, any Indian tribe, or, if such resources are subject to a trust restriction on alienation, any member of an Indian tribe." Natural resource services may be ecological or human. Ecological services include the physical, chemical and biological functions the natural resource provides, such as a food source or habitat. Human services include uses that provide public value, such as recreational fishing or hiking or as a drinking water source.

Federal trust resources protected by the Department of the Interior include migratory birds, threatened and endangered species and interjurisdictional fish. These listed trust resources, if located in Missouri, are also Missouri trust resources. Missouri is the trustee for all groundwater within the state. Groundwater is often a state only resource with no federal trustees,



Federally Threatened Ozark Cavefish

however, groundwater may be a federal resource if it provides habitat for a federally threatened species such as an Ozark cavefish. The National Contingency Plan requires when the state and federal trusteeship of natural resources overlap, the trustees form a trustee council to help with coordination.

What Represents a Natural Resource Injury?

The Department of the Interior regulations define injury as "...a measurable adverse change, either long - or short-term, in the chemical or physical quality or the viability of a natural resource resulting either directly or indirectly from exposure to a discharge of oil or release of a hazardous substance, or exposure to a product of reactions resulting from the discharge of oil or release of a hazardous substance..." Natural resource injury is also measured in the Department of the Interior's regulations. For groundwater, one of the ways the natural resource is considered injured is if the amount of contamination exceeds the maximum contaminant level set by EPA under the Federal Safe Drinking Water Act.



Double Spring

What is the Natural Resource Damage Assessment and Restoration Assessment Process?

The Department of the Interior's regulations outlines the assessment of natural resource damages under CERCLA and includes Type A and Type B assessments. Type A assessments are only used for coastal, marine or Great Lakes environments. The department conducts Type B assessments, which include a pre-assessment screen, an assessment and a post-assessment. The pre-assessment screen determines whether an injury has occurred and if additional action is warranted, for example, if response actions have not or will not restore the natural resources. The assessment determines the extent of natural resource injury and services lost. Fieldwork may be required and may be done at the same time as response actions if not enough data is available. Natural resource service loss is calculated by comparing current services with the baseline, that is, the state of the natural resource before the release. Groundwater services may be determined by calculating the volume of contaminated water, or determining the amount of water that enters the contaminated aquifer yearly, thereby becoming injured.

After determining the extent of injury, the department calculates financial damages to compensate for the loss. Damages may also be sought to compensate for the value of natural resource services lost from the time the injury occurred until restoration takes place, and to cover the department's natural resource damages assessment expenses. The department then presents a natural resource damages claim for compensation to the responsible party.

The post-assessment part of the process includes settlement and restoration. The natural resource damages claim may be settled in court or contested. After an agreement has been reached, according to CERCLA, the funds received must be used to restore, rehabilitate, replace or acquire the equivalent of the injured natural resources and lost natural resource services. Restoration may occur at the same time as remediation at a site, or it may be done after remediation is completed. The goal of restoration is to return the natural resources to baseline conditions. Primary restoration is on-site restoration that restores the injured natural resource. Compensatory restoration takes place when primary on-site restoration is not possible and may include restoring or preserving natural resources with comparable value and services. For example, funds from a natural resource damages settlement may be used to purchase a conservation easement for a property with comparable value and services to the natural resources lost. The conservation easement places restrictions on the property and protects its natural resources.

The Natural Resource Damage Assessment and Restoration Assessment Process in Action

The Newton County Wells Superfund site, or the FAG Bearings site, is a case of a groundwater Natural Resource Damage Assessment and Restoration assessment. The Newton County Wells Superfund Site is located in northern Newton County around the FAG Bearings property in Joplin. FAG Bearings manufactures steel ball bearings and ball bearing assemblies and used trichloroethene, or TCE, as a degreaser in this process from 1972 until 1981. In 1983, after decommissioning the TCE vapor degreaser, the piping for this process was cut, spilling residual TCE and contaminating the Mississippian drinking water aquifer.

The Missouri Department of Health and Senior Services identified the site in 1991, while sampling at a nearby facility. TCE was detected at levels exceeding EPA's maximum contaminant levels in residential wells in the Village of Silver Creek, south of the FAG Bearings property. After additional sampling, it was determined TCE from FAG Bearings also contaminated residential wells in Saginaw Village. Bottled water was provided to residents of both villages and the village of Silver Creek was connected to the Missouri American Water Company system in 1992. Saginaw Village was connected to the city water system in 1994. TCE was detected above the MCL in 62 wells up to two miles south of the FAG Bearings property.

In August 2004, FAG Bearings was notified of potential injuries to groundwater, a natural resource held in trust by the State of Missouri. The natural resource damages assessment was based on injuries caused when the TCE vapor degreaser piping was cut, causing spilled residual TCE to flow into a utility trench and migrate into the Mississippian aquifer, which was used as a public drinking water supply. Because the facility is located in the known habitat for threatened and endangered Ozark cavefish, the U.S. Fish & Wildlife Service, representing the Department of the Interior, was a co-trustee along with the State of Missouri in this case.

Groundwater damages were calculated by using the area's historical water rate per gallon and the average water usage per household in gallons per month, according to data from the Missouri Water American Company in Joplin. This information was used to determine the amount of potable water the wells would have produced if they were not contaminated and how much the public would have paid for this resource. The baseline services were calculated and "credit" was given due to previous unrelated metals contamination in the aquifer. Based on groundwater models, it was estimated groundwater would be injured for 30 years, assuming partial natural attenuation of the plume. The groundwater damage calculations began at the time the injury occurred, which was when the piping was cut in 1983, and ended 30 years from that date. A settlement agreement was reached with FAG Bearings in July 2006 for a cash out value of \$137,362, which was added to a May 2007 consent decree.

Missouri Department of Natural Resources - Hazardous Waste Program

Superfund Section

What is a Springfield Plateau Regional Restoration Plan?

This plan describes options for restoring injured natural resources in the Springfield Plateau Ecoregion. The Springfield Plateau lies in the western Ozark Highlands of southwest Missouri. It comprises portions of Cedar, Dade, Jasper, Newton, Lawrence, Greene, Polk, Webster, Christian, Barry, St. Clair, Hickory, Barton, McDonald, Stone and Douglas counties. The primary natural resource injury in this region is from past mining activities in Newton and Jasper counties.

The objective of the plan is to compensate the public, through environmental restoration, for losses of natural resources injured by releases of hazardous substances into the environment. Natural resource funds received must be used to restore, rehabilitate, replace and acquire the equivalent of the injured natural resources.

Restoration Project Evaluation Criteria

Request for proposals will be implemented over time to address various natural resource damages.

Each request for proposal will be tied to the natural resource injury such as aquatic restoration or upland restoration. Request for proposals will be evaluated on criteria outlined in the Springfield Plateau Restoration Plan.

There are two components to the project evaluation process. They are:

1. Acceptability criteria: These criteria evaluate the initial project and whether it is achievable.
2. Project ranking criteria:
 - Location to the injury.
 - Examples of preferred resources and services.
 - Benefits provided.
 - Time required for restoration.
 - No adverse environmental effects.
 - Cost-effectiveness.
 - Evaluation component.
 - Probability of success.



Superfund Section



Historic mining activities in Missouri have led to the potential injuries of the natural resources.



A restored site in Newton County now looks serene and majestic.

Missouri Department of Natural Resources - Hazardous Waste Program

Superfund Section

Settlement History

Settlement	Settlement Date	Available Restoration Funds (approx.)
Eagle Picher	2/95	\$200,000
Carver Salvage	2/95	\$3,000
Newton County Wells	5/07	\$100,000
ASARCO—Newton County	12/09	\$7 million
ASARCO—Jasper County	12/09	\$13 million

Plan Finalized

The Springfield Plateau Regional Restoration Plan is final and is published in the *Federal Register*. The document is written by the U.S. Fish and Wildlife Service and the Missouri Department of Natural Resources to guide the process of restoring natural resources injured by the release of hazardous substances.

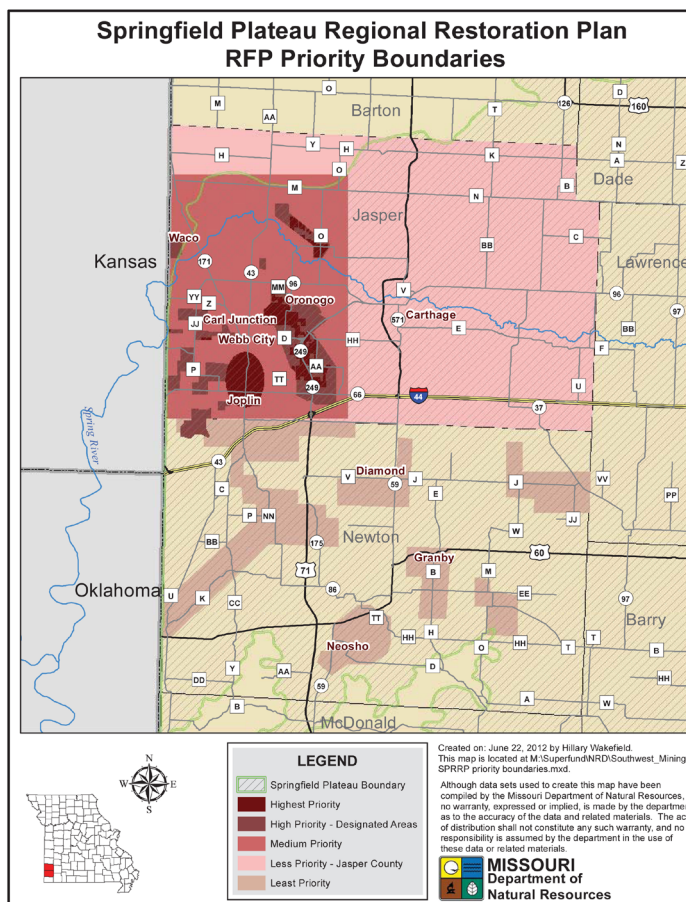
With the plan finalized, we are now able to advertise the first request for proposals for restoration projects within the Tri-State Mining District.

The first funds to be released are \$235,000 for riparian restoration resulting from Eagle Picher mining and smelting activities around Joplin. Priority will be given to projects to improve or protect riparian habitat that may enhance migratory bird habitat.

Additional Information

The Missouri Department of Natural Resources and the U.S. Fish and Wildlife Service invite the public to review the Springfield Plateau Regional Restoration Plan and Environmental Assessment.

The department is asking citizens to contact either of these agencies if they have questions about the natural resource damages process.



Petroleum Storage Tanks Fiscal 2012 Statistics

During fiscal year 2012, the department accomplished the following work related to petroleum storage tanks:

- Properly closed 301 tanks.
- Reviewed 107 closure reports.
- Approved 107 closure notices.
- Conducted 43 closure inspections.
- Conducted six site investigations.
- Responded to 12 emergencies involving petroleum releases.
- Reviewed 1,695 remediation documents.
- Oversaw completion of 143 remediation sites.
- Issued 283 certificates of registration.

A total of 97 new releases were reported during fiscal 2012. Department staff were notified about 68 new installations at tank sites and received 37 new site registrations. Compliance and Enforcement Section staff resolved 67 cases involving violations. At the end of the 2012 fiscal year, there were 226 active enforcement cases. Financial responsibility compliance was at 99.1 percent. This number reflects insurance coverage from both the Petroleum Storage Tank Insurance Fund, or PSTIF, and other private policies and statements. There were 60 state/federal exempt sites. This number does not include temporary closed tanks, which are not required to have financial responsibility. The department currently regulates 3,558 facilities with 9,335 active underground storage tanks.

Tanks Section holds workshop at the Missouri Waste Coalition Conference

The Hazardous Waste Program's Tanks Section held a Tanks Workshop on June 19 as part of the Missouri Waste Coalition Conference in the Lodge of the Four Seasons Hotel at Lake of the Ozarks. This was the fourth annual workshop in conjunction with the Missouri Waste Coalition events. This conference was targeted toward environmental consultants who provide services to tank owners and operators. The workshop provided consultants with information and training regarding monitoring well registration and installation.

The workshop included departmental staff along with private consultants, private laboratories and others. EPA also participated in the conference as an exhibitor and in a support role.

Drinking Water Impact in Gravois Mills

The Hazardous Waste Program's Tanks Section is currently assisting a home owner in Gravois Mills that has benzene at the maximum containment level in the drinking water well. The home is on a property that was formerly a gas station. The gas station performed tank closure and received a No Further Action letter in 2003. Recently the property was purchased and the well was found to contain benzene not detected in 2003.

The department is currently working with Culligan at Lake Ozark to provide the home owner with a carbon filtration system while the well is monitored for a year to evaluate the contamination. With the approval of EPA, the Tanks Section is using federal funding to provide the homeowner with safe drinking water.

Petroleum Storage
Tanks Regulation
June 2012

Staff Productivity	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11	Jan-12	Feb-12	Mar-12	Apr-12	May-12	Jun-12	TOTAL
Documents received for review	189	194	153	168	188	162	205	193	174	179	193	181	2,179
Remediation documents processed	137	159	171	165	144	171	149	124	125	123	111	116	1,695
Closure reports processed	14	8	11	8	8	4	11	6	13	7	13	4	107
Closure notices approved	9	6	2	7	11	10	5	3	13	6	9	19	100
Tank installation notices received	10	5	5	10	3	0	3	5	10	6	8	3	68
New site registrations	3	1	2	0	3	2	1	2	11	7	3	2	37
Facility Data													
Total in use, out of use and closed USTs	40,222	40,236	40,261	40,267	40,299	40,320	40,337	40,350	40,368	40,387	40,400	40,404	
Total permanently closed USTs	30,808	30,839	30,878	30,904	30,925	30,930	30,954	30,961	30,976	31,041	31,043	31,067	
In use and out of use USTs	9,412	9,395	9,395	9,375	9,386	9,388	9,381	9,387	9,390	9,358	9,355	9,335	
Out of use USTs	870	853	834	817	819	821	820	832	838	826	838	833	
Total hazardous substance USTs	395	395	395	395	395	395	396	398	398	398	398	398	
Facilities with in use and out of use USTs	3,578	3,568	3,569	3,566	3,569	3,572	3,570	3,570	3,573	3,565	3,565	3,558	
Facilities with one or more tank in use	3,276	3,264	3,270	3,271	3,272	3,273	3,273	3,273	3,275	3,272	3,266	3,259	

Closures

Underground Storage Tanks	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11	Jan-12	Feb-12	Mar-12	Apr-12	May-12	Jun-12	TOTAL	All Yrs
Closure Reports Reviewed	14	8	11	8	8	4	11	8	13	7	13	4	107	
Closure Notices Approved	9	8	2	7	11	10	5	3	13	8	9	18	100	
Number of Tanks Closed (Closure NFA)	23	48	57	28	21	15	17	18	7	19	18	28	301	

Cleanup

Underground Storage Tanks	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11	Jan-12	Feb-12	Mar-12	Apr-12	May-12	Jun-12	TOTAL	All Yrs
UST release files opened this month	2	2	3	1	0	0	3	17	5	10	8	8	58	8,414
UST cleanups completed this month	4	15	21	5	8	8	10	8	11	8	11	12	117	5,514
Ongoing UST cleanups	884	851	834	830	827	818	812	848	881	858	857	800		
Aboveground Storage Tanks														
AST release files opened this month	1	2	1	0	0	2	0	0	0	2	0	1	8	424
AST cleanups completed this month	1	0	6	1	0	1	0	0	0	3	1	0	13	258
Ongoing AST cleanups	188	170	164	163	164	164	164	166	168	168	166	180		
Both UST and AST														
Total release files-both UST & AST	0	0	0	0	0	0	0	0	0	0	0	0	0	74
Cleanups completed-both UST & AST	0	0	0	0	0	1	0	0	0	0	1	0	2	74
Ongoing cleanups-both UST & AST	31	31	31	31	31	30	31	31	31	31	30	30		
Unknown Source														
Total release files-unknown source	2	0	0	2	1	1	3	4	5	4	8	1	28	221
Cleanups completed-unknown source	1	2	1	1	3	0	0	1	0	1	1	0	11	178
Ongoing cleanups-unknown source	110	113	113	115	111	118	128	88	82	85	88	18		
Documents Processed	137	159	171	165	144	171	149	124	125	123	111	116	1,695	
Reopened Remediation Cases	0	0	0	0	1	0	0	0	1	0	0	1	3	100

Effective December 2008 tanks with unknown substance will be included in total figures. Some measures are re-calculated each month for all previous months to reflect items added or edited after the end of the previous reporting period.